

# **PUMP SENSE INTERFACE MODULE**

**Form Number 847490-204**

**(For TLS-350 Systems)**

**Manual No. 576013-822**

## **IMPORTANT!**

**This module is to be installed only in the Power Area  
of the TLS-350 Monitor!**

**For Setup Function Instructions, see  
TLS-350 "System Setup Instructions",  
Manual No. 576013-623**

**For Operating Instructions, see  
TLS-350 "System Operating Instructions",  
Manual No. 576013-610**

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**ATTENTION INSTALLER:**

**READ THIS IMPORTANT SAFETY  
INFORMATION  
BEFORE BEGINNING WORK**

This product is to be installed and operated in the highly combustible environment of a gasoline storage tank. It is essential that you carefully read and follow the warnings and instructions in this manual to protect yourself and others from serious injury, explosion, or electrical shock.

For safety reasons, we have taken particular care in the design of this product to limit the power in the wiring to the fuel tanks and to keep that wiring physically separated from any other wiring. It is your responsibility to maintain the effectiveness of these safety features by installing this product in accordance with the instructions and warnings which follow. Your failure to do so could create danger to life and property.

Leaking underground tanks can create serious environmental and health hazards. It is your responsibility to install this product in accordance with the instructions and warnings found in this manual.

Failure to install this product in accordance with its instructions and warnings will result in voiding of all warranties connected with this product.



**WARNINGS:**

**IN INSTALLATION OF THIS PRODUCT, COMPLY WITH THE NATIONAL ELECTRICAL CODE; FEDERAL, STATE AND LOCAL CODES; AND OTHER APPLICABLE SAFETY CODES.**

**TO AVOID ELECTRICAL SHOCK WHICH COULD KILL YOU, BE SURE AC POWER TO THE MONITOR IS OFF DURING INSTALLATION.**

**CAREFULLY READ THE INSTALLATION INSTRUCTIONS AND WARNINGS FOUND IN THIS MANUAL. FAILURE TO DO SO COULD RESULT IN UNDETECTED POTENTIAL ENVIRONMENTAL AND HEALTH HAZARDS.**

**FAILURE TO COMPLY WITH THESE REQUIREMENTS COULD RESULT IN DEATH, SERIOUS PERSONAL INJURY, PROPERTY LOSS, OR EQUIPMENT DAMAGE AND UNDETECTED POTENTIAL ENVIRONMENTAL AND HEALTH HAZARDS.**

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**SECTION 1. INTRODUCTION**

**A. GENERAL**


1. This manual contains installation procedures for the installation of a Pump Sense Interface Module, Part No. 847490-204, in an existing TLS-350 UST Monitoring System designed and manufactured by Veeder-Root Company. This manual assumes that all preliminary site preparation is completed, and that field wiring is in place.

If this is a new installation or site preparation is necessary, refer to the Veeder-Root TLS-350 "Site Preparation and Installation Instructions," Manual No. 576013-622, Line Leak Detector "Site Preparation and Installation Instructions," Manual No. 576013-764, or contact your Veeder-Root representative for assistance.

2. When a vertical bar **|** appears adjacent to text or illustrations, information has been added or changed at the last revision date.

**B. DAMAGE CLAIMS**

1. Thoroughly examine all components and units as soon as received.

 **NOTE:** Insist that the carrier's agent verify the inspection and sign the description.

2. Immediately notify the delivering carrier of damage or loss. This notification may be given either in person or by telephone. Written confirmation must be mailed within 48 hours. Railroads and motor carriers are understandably reluctant to make adjustments for damaged merchandise unless inspected and reported promptly.

3. Risk of loss, or damage to merchandise remains with the buyer. It is the buyer's responsibility to file a claim with the carrier involved.

4. Immediately advise your Veeder-Root representative, distributor, or Veeder-Root headquarters in Simsbury, Connecticut so that we may assist you.

**C. RETURN SHIPPING.**

All shipments of Veeder-Root products must be prepaid. If the module is damaged, return it in the original shipping container with shock absorbing material provided. Veeder-Root will accept no liability for damage caused by improper packing. Address the shipment to Veeder-Root Company, 6th Avenue at Burns Crossing, Altoona, Pennsylvania 16603.

# **V** VEEDER-ROOT PUMP SENSE **R** INTERFACE MODULE INSTALLATION

## SECTION 2. INSTALLATION

### **IMPORTANT!**

If you are installing this module in a system that has already been programmed, you **CANNOT CHANGE** the positions of existing modules and/or connectors without re-programming the entire system.

If any connectors are removed during installation, **BE SURE** they are re-connected to their original modules.

### A. REQUIREMENTS

Installing interface modules in a TLS-350 Monitor is a simple process. However, there are important points to remember.

1. For each module, a corresponding expansion slot with a connector must be available.

2. ALL unused expansion slots **MUST** be covered.

### B. MODULE/CONNECTOR POSITIONS

#### 1. Module Position

a. Record on the circuit directory (located on the inside front panel) the type of module you are installing in this slot.

b. Once a particular type of module has been installed in that slot, the system will always look for that type of module in that slot.

#### 2. Connector Position

a. Identify all connectors according to their slot location using the self-adhesive numbering labels supplied with each module.

b. Once a device has been wired to certain terminals on the connector and the system has been programmed, terminal position may not be changed without re-programming the system.

### C. MODULE INSTALLATION



**WARNING: INSTALL THIS MODULE IN ONLY THE POWER AREA OF THE MONITOR.**



**WARNING: TO AVOID ELECTRICAL SHOCK WHICH COULD KILL YOU, BE SURE AC POWER TO THE TLS-350 MONITOR IS OFF BEFORE OPENING THE FRONT-PANEL AND INSTALLING OR WIRING ANY EXPANSION MODULE. IF HIGH VOLTAGE IS SHORTED ACROSS ANY BARRIER TERMINAL, EXPLOSION AND FIRE COULD RESULT.**

1. Hold the module with its snap-in fasteners positioned in the lower right and left corners and carefully slide the module into its slot until its connector engages with the connector on the board.

2. Press down on the snap-in fasteners to secure the module.

3. **BE SURE ALL SLOTS** are covered with snap-in plates!

### D. PUMP SENSE INTERFACE MODULE WIRING CONNECTIONS



**WARNING: TO AVOID ELECTRICAL SHOCK WHICH COULD KILL YOU, BE SURE AC POWER TO THE TLS-350 MONITOR IS OFF BEFORE OPENING THE FRONT-PANEL AND INSTALLING OR WIRING ANY EXPANSION MODULE. IF HIGH VOLTAGE IS SHORTED ACROSS ANY BARRIER TERMINAL, EXPLOSION AND FIRE COULD RESULT.**

1. The Pump Sense Interface Module comes with a connector in place. The connector provides screw terminations for switch inputs and AC controls. **Do not remove the connector from the module or remove the module from its slot in the monitor during wiring.** Terminal identifications appear only on the module bracket. Removing the connector from the module increases the risk of wiring errors.

2. Label all connectors using the self-adhesive labels supplied according to the slot in which the modules are installed.

3. Record the location (i.e., Tank #1, Tank #2, etc.) of each Pump Sense wired to a module on the circuit directory located inside the TLS-350 door.



**CAUTION: ONCE PUMP SENSE WIRING HAS BEEN CONNECTED AND THE SYSTEM HAS BEEN PROGRAMMED, MODULE, CONNECTOR AND WIRING POSITIONS CANNOT BE CHANGED WITHOUT RE-PROGRAMMING THE SYSTEM.**

**IMPROPER SYSTEM OPERATION WILL RESULT IF ANY ONE OF THESE POSITIONS IS CHANGED WITHOUT RE-PROGRAMMING.**

4. Connect the two (2) color-coded or marked wires from the pump controls to the proper terminals on the Pump Sense Interface Module connector (see Figure 1, "Pump Sense and Pump Control Wiring Diagram for Red Jacket Relay Control Box," and Figure 2, "Pump Sense and Pump Control Wiring Diagram for Non-Red Jacket Relay Control Box").

**IMPORTANT: Be sure to maintain the correct circuit orientation between the color-coded or marked field wires and connector terminals during wiring.**

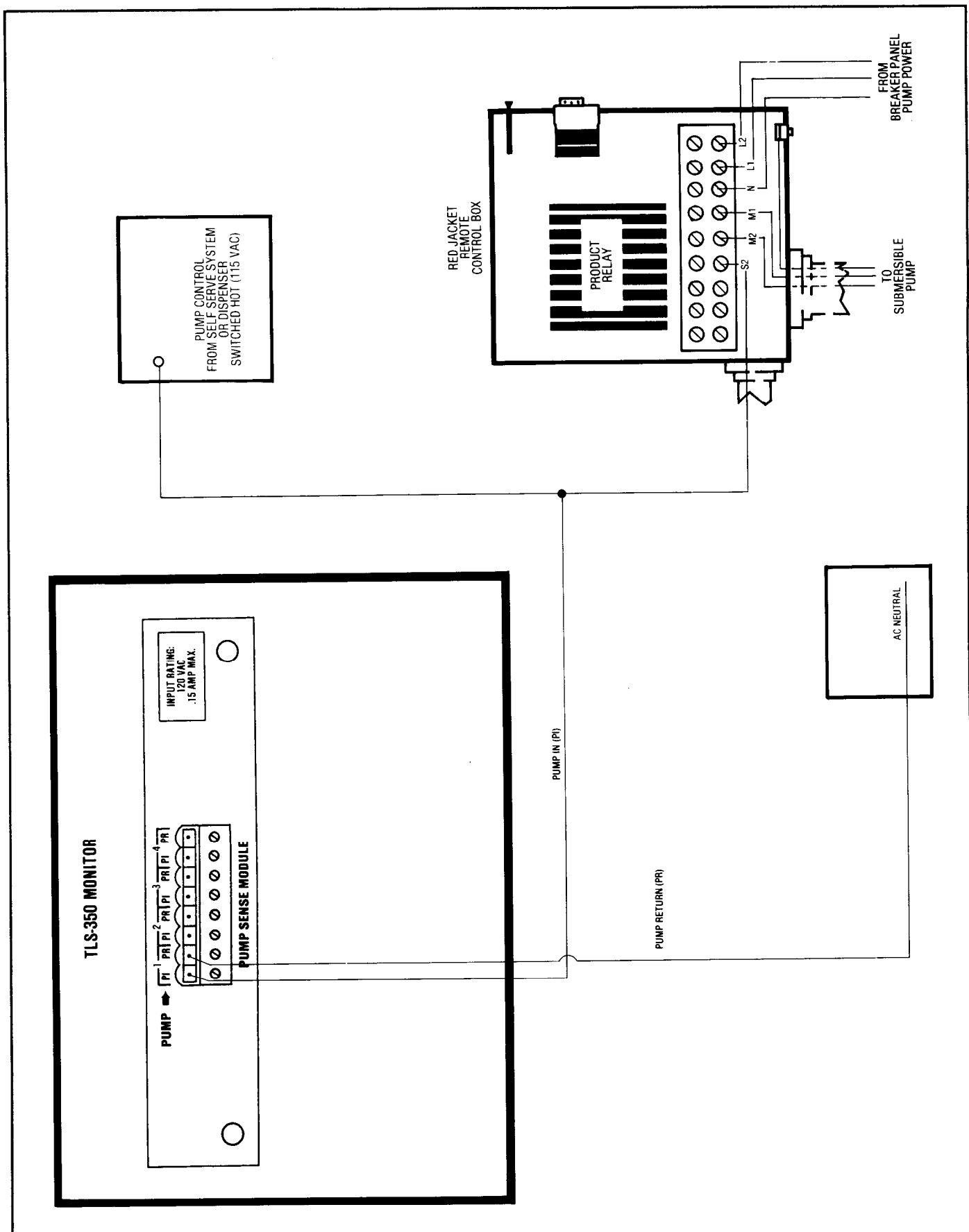


Figure 1. Pump Sense and Pump Control Wiring Diagram for Red Jacket Relay Control Box

**VEEDER-ROOT PUMP SENSE  
INTERFACE MODULE INSTALLATION**

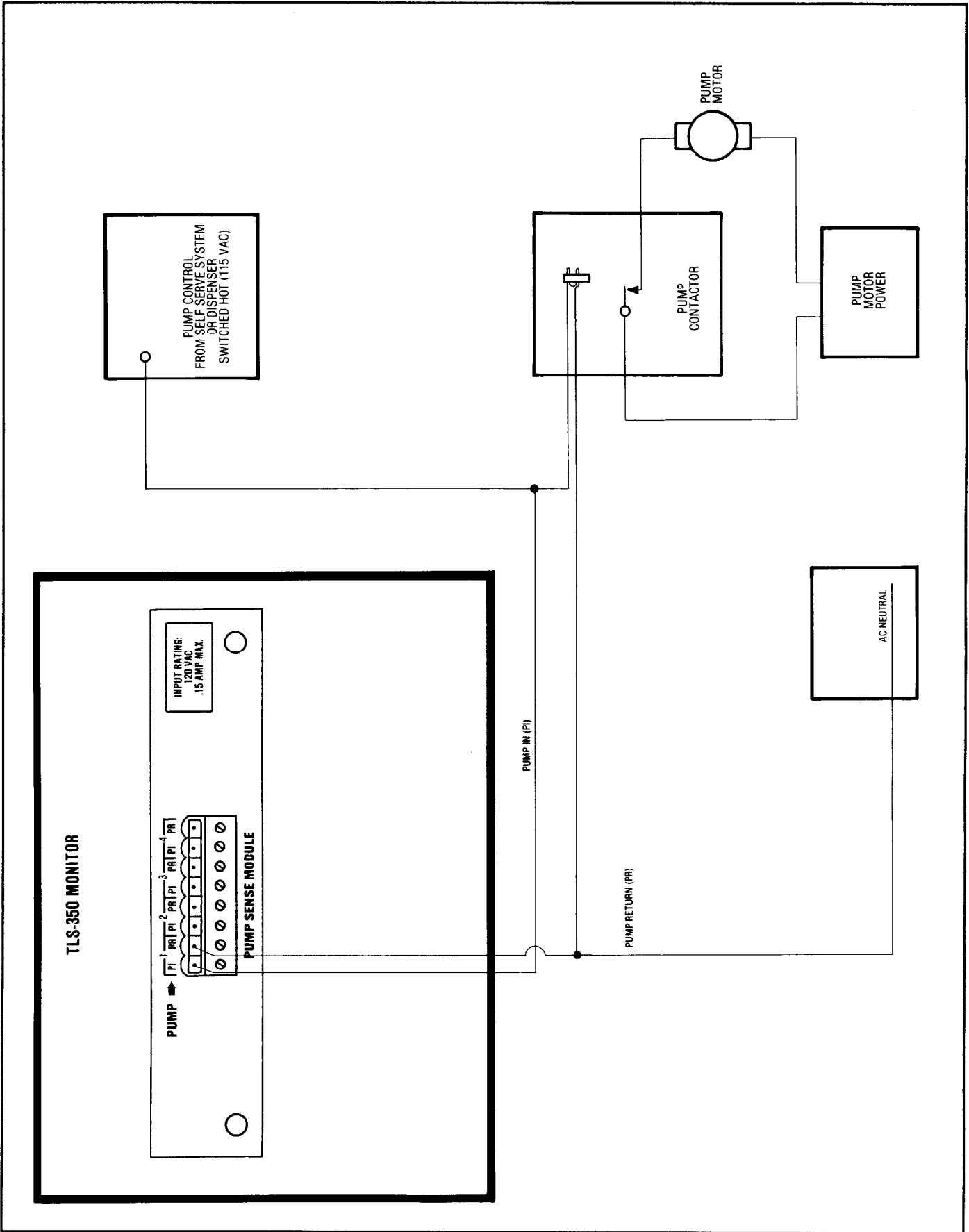


Figure 2. Pump Sense and Pump Control Wiring Diagram for Non-Red Jacket Relay Control Box

**SECTION 3. WARRANTY CONDITIONS AND LIMITATIONS OF LIABILITY**

**A. LIMITATIONS OF LIABILITY.** We warrant that this product shall be free from defects in materials and workmanship for a period of one (1) year from the date of installation or fifteen (15) months from the date of invoice, whichever occurs first. During the first ninety (90) days of this warranty period, we will repair or replace the product, if determined by us to be defective, at the location where the product is in use and at no charge to the purchaser. After the first ninety (90) days of this warranty period, we will repair or replace the product if it is returned to us, transportation prepaid, within the warranty period and is determined by us to be defective. We shall not be responsible for any expenses incurred by the user.

This warranty applies only when the product is installed in accordance with Veeder-Root's specifications, and a Warranty Registration and Checkout Form has been filed with Veeder-Root by an Authorized Veeder-Root Distributor. This warranty will not apply to any product which has been subjected to misuse, negligence or accident; or misapplied; or used in violation of product manuals, instructions or warnings; or modified or repaired by unauthorized persons; or improperly installed.

**B. INSPECTION.** You shall inspect the product promptly after receipt and shall notify us at our Simsbury office in writing of any claims, including claims of breach of warranty, within thirty days after you discover or should have discovered the facts upon which the claim is based. Your failure to give written notice of a claim within the time period shall be deemed to be a waiver of such claim.

**C. LIMITATION OF REMEDY AND WARRANTY.** The provisions of Paragraph A are our sole obligation and exclude all other remedies or warranties, express or implied, including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE, whether or not purposes or specifications are described herein. We further disclaim any responsibility whatsoever to you or to any other person for injury to person or damage to or loss of property or value caused by any product which has been subjected to misuse, negligence, or accident; or misapplied; or used in violation of product manuals, instructions or warnings; or modified or repaired by unauthorized persons; or improperly installed.

**D. LIMITATION OF DAMAGES.** Under no circumstances shall we be liable for any incidental, consequential or specific damages, losses or expenses arising from this contract or its performance or in connection with the use of, or inability to use, our product for any purpose whatsoever.

**E. LIMITATION OF ACTIONS.** No action regardless of form arising out of this contract may be commenced more than one year after the cause of action has accrued, except an action for nonpayment.

**F. COLLATERAL PROMISES.** There are no representations, warranties, or conditions, express or implied, statutory or otherwise except those herein contained, and no agreement or waivers collateral hereto shall be binding on either party unless in writing and signed by you and accepted by us at our Simsbury office.

**G. INTERPRETATION.** Rights and liabilities arising out of any contract with us shall be determined under the Uniform Commercial Code as enacted in Connecticut.

Warranty revised January 1, 1992

**VEEDER-ROOT** **VR**  
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